

13. *B. sulphurea*, Engelm. Nearly as in the last but with shorter racemes, persistent stipules and yellow flowers which have an obtuse ovary with longer style. Arkansas.

==== Legumes boat shaped, abruptly and sharply acuminate.

14. *B. villosa*, Nuttall. Racemes somewhat declining or erect; flowers yellow, short pedicelled; legumes little inflated, obtuse at base. Virginia, North Carolina and Arkansas.

15. *B. leucophæa*, Nuttall. Racemes strongly declined; flowers cream-colored, on long pedicels subtended by large persistent bracts; legumes much inflated, strongly acuminate at each end. Michigan, south to Texas and east to South Carolina.

var. *laricaulis*, Gray. Smaller in all its parts and nearly smooth. Texas.

16. *B. australis*, R. Brown. Smooth; racemes many or several, erect; flowers blue or sometimes chocolate-colored with the vexillum sometimes auriculate; legumes erect, long and little inflated. Pennsylvania and Ohio to Georgia and Arkansas.

var. *minor*, Torr. and Gray. "Flowers smaller and fewer; vexillum not auriculate." Arkansas.

For the last nine species this arrangement may be preferred by some:

= Flowers yellow.

8. *B. Sevenæ*, M. A. Curtis.

9. *B. megacarpa*, Chapm.

10. *B. sphaerocarpa*, Nutt.

11. *B. sulphurea*, Engelm.

12. *B. villosa*, Nutt.

== Flowers white or cream-color.

13. *B. leucophæa*, Nutt.

var. *laricaulis*, Gray

14. *B. leucantha*, Torr. and Gray.

15. *B. alba*, R. Brown.

=== Flowers blue.

16. *B. australis*, R. Brown.

var. *minor*, Torr. and Gray.

A VISIT TO THE SHELL ISLANDS OF FLORIDA, by A. H. Curtiss.—Paper II.—Taking up the thread of our narrative where lately it was dropped, we find ourselves at the entrance of the channel which, through "wide-spread, reedy fens," leads to the Island of Pines. The tide is beginning to run out, and warns us to hasten or remain stranded somewhere in the morass till midnight. Rowing is impossible, but by pushing and paddling, we manage to get along very well through the broader reaches of the watery alley. All goes well for a while, but presently the creek forks and we know not which way to turn. The left-hand course appears more navigable, and soon we are toiling through a ditch which becomes narrower as we progress. It winds to the right and then to the left, and folds upon itself like a writhing

serpent, wandering, as it were, without aim or purpose, like one bewildered. Standing up in the boat and looking over the grassy plain, we report to those sitting: "We are approaching the island." "It is on our left." "It is behind us." A quarter of an hour passes, and the report is: "We are evidently receding from the island and must have taken the wrong course." A brief consultation follows and we decide to go on. Already we have pushed the boat over shallows with difficulty, and the tide is falling rapidly. The channel becomes narrower and several times the boat is turned with great difficulty by pushing bow and stern from opposite directions. At one point we are only an oar's length from where we were ten minutes before. Gradually we near the shore and at last only one elbow remains to be turned. But it is impossible to get the boat around this until the tide rises, and so leaving it tied to the rushes we make our way ashore as best we can. The steep white bank is surmounted by Bayonets and Cactuses which present a forbidding front, and rising from among these a few dead and weather beaten Cedars stretch forward their gaunt, white branches as if to forbid our approach. However we make the landing in safety, climb the ascent and after passing these grim sentinels, suddenly enter a verdant shady avenue. Live Oaks, Palmettos and Cedars border the way and cast a refreshing shade. Their branches are garlanded with vines and fringed with the Spanish moss. The thread-like *Vincetoxicum* dangles from the dagger-shaped leaves of a towering *Yucca*, and gathering themselves into a coil unwind again in the top of a spiny *Sageretia* or a drooping *Sapindus*. Huge plaited Palmetto leaves rustle as we pass. The *Cocculus Carolinus* and *Passiflora suberosa* grow in endless profusion, forming banks of richest verdure and carpeting with their Ivy-like leaves the pavement of white shells. Of shrubs the most noticeable is the *Chiococca racemosa* and *Psychotria rufescens*. Both are allied to *Coffea* and the former bears a considerable resemblance to it. The branches are slender and flexuous, the leaves lanceolate and shining; the small bell-shaped flowers are borne in drooping axillary racemes and are succeeded by berries of snowy whiteness whence the generic name, which means Snow-berry. The berries of the Coffee shrub are red. The *Psychotria* is a little shrub not more than a foot in height with cymes of scarlet berries among clusters of shining green leaves. The *Chiococca*, *Vincetoxicum*, and several other plants found on these islands were, previous to our visit, ascribed to South Florida. Growing in the deepest shades we find a delicate little plant of unique aspect, somewhat resembling in texture and shape of leaves the

Sedum ternatum, but yet not traceable to any known genus of United States plants. Not until its filiform spikes of minute flowers are found, can we even guess at its identity. Then we exclaim exultantly, *Peperomia!* Upon tasting it the warm, aromatic flavor of the favorite condiment is at once perceived. It is a congener of the Black Pepper, a most interesting addition to our flora and will be a companion for the hitherto isolated *Saururus*. As we reach the border-land of shadow and sunshine we meet a number of plants of quite a different character, plants which beside the stately and elegant species just visited, might be called plebeian, or in common parlance, weedy. Here is the Black Nightshade comparing notes with its cousins, *Capsicum* and *Physalis*. Here too are some gigantic *Phytolaccas*, likewise with a company of relatives, *Rivina*, *Boerhaavia* and *Petiveria*. The Poke-weed calls for no description. No verse was ever dedicated to it, though many verses have been written with its juice. Looking at it from a poetical point of view, we would call it a plant of a peculiarly modest and retiring disposition, blushing to its very roots at the thought of its bare, awkward shape, and drooping its flowers as though it would be where the *Arbutus* traileth. Dealing with it practically, we apply axe and grubbing hoe to every plant we find, for here in Florida it becomes a small tree and an unsightly object. The *Rivina* is a straggling, half-shrubby plant, with cinereous foliage and racemes of small, delicate, pink flowers and scarlet berries. The *Petiveria* much resembles *Polygonum Virginianum* in general appearance and has the odor of Garlic. We have now reached a large clearing, which, since denuded of trees, has become a natural garden, filled with a great variety of luxuriant and beautiful plants. The most conspicuous of these is the *Verbesina sinuata*, a large and showy Composite which contrasts well with the more delicate herbage. Morning-glories of various colors grow here in astonishing profusion, and when seen in the early morning their beauty is indescribable. There are three species, *Ipomoea commutata* with delicate leaves and purplish flowers, *I. Michauxii* with coarse foliage and white flowers and *I. hederifolia* with flowers of azure blue. There are large beds of *Mentzelia*, brilliant with golden flowers, spreading mats of *Commelyna communis* with delicate blue flowers, and here and there covering a shelly mound we find the delicate *Melothria pendula* or "Rabbit Cucumber" with curious green fruit hanging from hair-like peduncles. Every stump is hidden under vines of *Cocculus*, *Bignonia*, *Gonolobus* and *Smilax*. Lending grace to the scene are a variety of beautiful grasses, the gracefully drooping

Uniola nitida, the stately *Setaria Composita*, and, carpeting the ground, the delicate *Panicum hirtellum*. To a naturalist no garden could be more beautiful. Art could only improve it by opening paths among its tangled mazes. Having crossed the clearing we find ourselves suddenly in a very dark and humid forest. Here there is scarcely any herbage except ferns and even these grow sparingly. Innumerable vines of the Grape and *Gonolobus*, of the prickly *Smilax*, and serpentine *Berchemia*, seek the tree tops and obstruct the way. In an opening there is a fine growth of a Vetch, similar to *V. tetrasperma*, which Mr. Watson has named *V. Floridaea*. With this exception nothing of interest rewards our search. It is a dismal region and we are glad to hasten back to the sunshine and to the boat which is now well afloat. The island may have untold treasures in reserve, but the price demanded is too great. Physical suffering outweighs intellectual enjoyment and we decide that the limit of endurance has been reached. For twelve hours or more we have fought an invisible foe, and at last we succumb to a minute winged particle of matter called the sand-fly. The coast of Florida would be a naturalist's paradise but for the sandflies, deerflies and mosquitoes (large and small) which infest it. But if only one of these pests might be removed let that be the sand-fly. Its strength consists chiefly in its littleness, as it penetrates any but the most closely woven fabric. It crawls through the hair and beard and into the eyes, nose and ears, biting where it goes until its victim is almost maddened and compelled to build a fire and take refuge in its smoke. Such a scourge might have driven our first parents from paradise. Evidently persons have attempted to make this island their home but have been obliged to abandon it. Gladly we step into our boat again and push from the shore, and, after again turning a hundred right angles, it is with a sense of relief that we shoot out into the free rolling waters of the St. John's. Sailing past that portion of the island which is covered with Pines we next seek the entrance to Stratton Island, the second in size of the group. It is with comparative ease, yet with "many a winding bout," that we effect an entrance through the marshes which environ it. Climbing its steep, shelly banks, we follow a path well trodden by fishermen, leading along a narrow ridge with steep sides, which becomes rugged and precipitous as we advance. The shells slip under our feet, low-branching, gnarled, and lichen-clad trees render progress difficult, and after advancing nearly half a mile, we turn back, but not until we have discovered two fine growths of the *Cheilanthes microphylla*, a fern not before found in the United States except on

the borders of Mexico, where it is said to have been collected many years ago. It is similar to *C. vestita* but smoother and more delicate, intermediate between that and *C. Alabamensis*. Here we also find the *Eugenia monticola*, a low shrub with handsome coriaceous leaves having the strong aromatic flavor of Allspice, which is the fruit of the *Eugenia pimenta*. Another new find is a stout, entire leaved form of *Ipomoea hederifolia*, which Prof. Gray has called var. *integriuscula*. We also find growing in abundance on this ridge, the *Psychotria*, *Sageretia* and *Forestiera* before mentioned. The last two flower in the fall and fruit in the spring. Here likewise are the *Frangula*, *Clematis Catesbyana*, *Urtica chamædryoides*, *Parictaria debilis*, *Stellaria prostrata*, etc. The variety of surface and vegetation is truly wonderful. Stepping down from the ridge we are all at once surrounded by a strictly littoral vegetation, such as *Baccharis*, *Borrichia*, *Statice* and *Sesuvium*. Following the base of the ridge we come to a small swamp filled with sedges and Solidagos. Upon turning to the right we enter the very ideal of a tropical forest, one of nature's cathedrals, grand and awe-inspiring, full of objects strange and beautiful from the "lordly king of Palms to the lichen which staineth its stem." Huge trunks and leaves and countless vines festooned from tree to tree circumscribe the vision, while over our heads the gigantic leaves of the Tree Palmetto form a majestic canopy. On the ponderous branches of Live Oaks are luxuriant growths of ferns, and streaming down from branch and branchlet, the Grey Moss hangs motionless, adding solemnity to the scene. What is there in nature so exquisitely beautiful as the long Grey Moss of these southern forests? In its ever undulating lines of growth are embodied the "lines of beauty and of grace." Whether hanging motionless from lofty branches like stalactites in a cave, or writhing in the wind like the Gorgons' tresses, it has a beauty peculiarly its own, magical and weird. It seems out of place among its surroundings and better fitted for the land of the fairies where plants might be expected to have, like this, grey foliage and green flowers, and to grow downward and feed on thin air.

As we have advanced into the gloomy depths of the forest, the sun has sunk low, and as it disappears below the horizon, the shades of night gather in the dark recesses and seem to people them with unseen presences. Unperceived vines grapple us as we hurry along; everything we touch seems to awaken the echoes. The great leaves of the Palmetto that hang like curtains in our way, rustle as we press them aside, while the dead and fallen ones crackle loudly beneath our tread. Thoughts arise of bloody traditions connected with this

region, of massacres by the Spanish, French and Indians who for centuries disputed the soil; of a whole garri-on left hanging on the trees, if not on this, on some neighboring shore. Excavations are found at frequent intervals of every shape and size, said to have been dug by people who were searching for hidden treasures. Emerging from the forest we soon reach a blazing camp fire, and after partaking of the supper prepared for us, we spread our rubber blankets on a mattress of cedar boughs, unroll bedding and erect a mosquito canopy.

A threatening thunder cloud has passed away, and the stars are shining brightly. A soothing sound of whispering breezes and lapping waters mingles with the ocean's deep diapason. The air is cool and refreshing. We hope for a good night's rest and in the morning to start for the sea-beach.—(To be concluded.)

NEW SPECIES OF FUNGI, by Chas. H. Peck.—Specimens of the species of fungi here described have been received from the various sources indicated.

AGARICUS CHLORINOSMUS.*—Pileus convex or expanded, warty on the disk, covered on the even margin with a light powdery at length evanescent substance, white; lamellæ white; stem nearly cylindrical, stout, deeply penetrating the earth; spores broadly elliptical, .0003–.0004 of an inch long; odor distinct, chlorine-like.

Plant six to seven inches high, pileus four to six inches broad, stem one to two inches thick.

Burnt ground in woods. Closter, N. J. August. *C. F. Austin.*

I have seen only a single dried specimen but the characters are so striking and peculiar that there can be no difficulty in identifying the species. The large size, the peculiar odor and the powdery substance on the margin of the pileus, which according to Mr. Austin's notes is nearly half an inch thick, are characters not easily overlooked. Because of the warty disk I should refer the species to the subgenus *Amanita*, yet no volva was detected. No trace of an annulus is visible in the dried specimen and the stem having been cut from the pileus it is not clear whether the lamellæ were free or not.

AGARICUS MORGANI.—Pileus fleshy, soft, at first subglobose, then expanded or even depressed, white, the brownish or alutaceous cuticle breaking up into scales except on the disk; lamellæ close, lanceolate, remote, white, then green; stem firm, equal or tapering up-

*Since reading proof, the Torrey Bulletin for December has come to hand containing a description of this species furnished by Mr. Austin, without the author's knowledge.